

WHAT IS CLAIMED IS:

- 1                   1.       A catcher for receiving expended shell casings from a firearm  
2       having an ejection port as the firearm is discharged, the catcher comprising:  
3                   a hollow housing having a plurality of rigid walls, wherein one of the  
4       walls has an opening in communication with the ejection port when the catcher is  
5       mounted to the firearm for receiving the shell casings; and  
6                   a lining fixed inside the rigid walls, wherein the lining comprises an  
7       acoustic foam having a plurality of wedges and the wedges are configured to deflect  
8       the shell casings into the catcher.
- 1                   2.       The catcher of claim 1 further comprising a seal attached to  
2       the housing at the opening, wherein the seal is configured to provide a substantially  
3       air-tight path between the ejection port and the opening.
- 1                   3.       The catcher of claim 1 wherein the acoustic foam is a partially-  
2       open cell foam having approximately 85% cell reticulation.
- 1                   4.       The catcher of claim 2 wherein the seal comprises a resilient,  
2       compliant material in a solid, gel-sac, closed-cell foam, or skin covered foam  
3       configuration.
- 1                   5.       The catcher of claim 1 wherein each of the wedges has a front  
2       face that is slanted away from the opening such that the casings are deflected away  
3       from the opening and a rear face that is perpendicular to the planar surface of the  
4       housing or slanted away from the opening such that the casings are resisted from  
5       traveling back toward the opening even when bouncing inside the housing.
- 1                   6.       The catcher of claim 1 wherein each of the wedges has a  
2       height that is equal to or greater than the diameter of the cartridge casing that is  
3       captured by the catcher.

1                    7.        The catcher of claim 1 wherein the wedges are adjacent or  
2 separated by a gap.

1                    8.        The catcher of claim 5 wherein the front surface of each of the  
2 wedges is covered by a layer of a perforated material.

1                    9.        The catcher of claim 5 wherein the front surface and the rear  
2 surface of each of the wedges is covered by a layer of a perforated material.

1                    10.      A method of reducing jamming of a firearm as a spend  
2 cartridge is ejected from and ejection port into a cartridge casing catcher when the  
3 firearm is discharged, the method comprising:  
4                    providing a hollow housing having a plurality of rigid walls, wherein  
5 one of the walls has an opening in communication with the ejection port when the  
6 catcher is mounted to the firearm for receiving the shell casings; and  
7                    fixing a lining inside the rigid walls, wherein the lining comprises an  
8 acoustic foam having a plurality of wedges and the wedges are configured to deflect  
9 the shell casings into the catcher.

1                    11.      The method of claim 10 further comprising attaching a seal  
2 to the housing at the opening, wherein the seal is configured to provide a  
3 substantially air-tight path between the ejection port and the opening.

1                    12.      The method of claim 10 wherein the acoustic foam is a  
2 partially-open cell foam having approximately 85% cell reticulation.

1                    13.      The method of claim 11 wherein the seal comprises a resilient,  
2 compliant material in a solid, gel-sac, closed-cell foam, or skin covered foam  
3 configuration.

1                    14.      The method of claim 10 wherein each of the wedges has a  
2 front face that is slanted away from the opening such that the casings are deflected  
3 away from the opening and a rear face that is perpendicular to the planar surface of

4 the housing or slanted away from the opening such that the casings are resisted from  
5 traveling back toward the opening even when bouncing inside the housing.

1 15. The method of claim 10 wherein each of the wedges has a  
2 height that is equal to or greater than the diameter of the cartridge casing that is  
3 captured by the catcher.

1 16. The method of claim 10 wherein the wedges are adjacent or  
2 separated by a gap.

1 17. The method of claim 14 wherein the front surface of each of  
2 the wedges is covered by a layer of a perforated material.

1 18. The method of claim 14 wherein the front surface and the rear  
2 surface of each of the wedges is covered by a layer of a perforated material.

1 19. A lining for a catcher for receiving expended shell casings  
2 from a firearm having an ejection port as the firearm is discharged, wherein the  
3 catcher is a hollow housing having a plurality of rigid walls, and one of the walls  
4 has an opening in communication with the ejection port when the catcher is mounted  
5 to the firearm for receiving the shell casings, the liner comprising an acoustic foam  
6 having a plurality of wedges and the wedges are configured to deflect the shell  
7 casings into the catcher.

1 20. The lining of claim 19 wherein each of the wedges has a front  
2 face that is slanted away from the opening such that the casings are deflected away  
3 from the opening and a rear face that is perpendicular to the planar surface of the  
4 housing or slanted away from the opening such that the casings are resisted from  
5 traveling back toward the opening even when bouncing inside the housing.